

Receptor Survey

Castlebridge Properties, LLC Property

200/280 National Avenue

Spartanburg, South Carolina

VCC 07-5712-RP

February 5, 2015

Terracon Project No. 86117014

RECEIVED

FEB 12 2015

SITE ASSESSMENT,
REMEDICATION &
REVITALIZATION



Prepared for Submittal to:

SCDHEC Bureau of Land and Waste Management
Columbia, South Carolina

Prepared by:

Terracon Consultants, Inc.
Taylors, South Carolina

Offices Nationwide
Employee-Owned

Established in 1965
terracon.com

Terracon

Geotechnical ■ Environmental ■ Construction Materials ■ Facilities



February 5, 2015

State Remediation Section
Bureau of Land and Waste Management
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201-1708

Attn: Ms. Keisha Long
PHN: 803-896-4872
FAX: 803-896-4292
Email: longkd@dhec.sc.gov

Re: **Receptor Survey**
Castlebridge Properties, LLC Property
200/280 National Avenue
Spartanburg, Spartanburg County, South Carolina
VCC 07-5712-RP
Terracon Project No. 86117104

Dear Ms. Long:

Terracon Consultants, Inc. (Terracon) is pleased to submit this Receptor Survey for the above referenced property. This survey was performed in support of SCDHEC Voluntary Cleanup Contract (VCC) 07-5712-RP.

If you have any questions or comments pertaining to the material presented herein, please contact the undersigned at (864) 292-2901.

Sincerely,

Terracon

Clayton T. Welborn, P.G.
Project Geologist

Craig D. Eady, P.G.
Senior Geologist

Terracon Consultants, Inc. 3534 Rutherford Road Taylors, South Carolina 29687
P [864] 292 2901 F [864] 292 6361 terracon.com

Geotechnical



Environmental



Construction Materials



Facilities

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
1.1	Site Description.....	1
1.2	Site History	1
1.3	Previous Site Assessments.....	1
1.4	Hydrologic Setting.....	3
2.0	RECEPTOR EVALUATION	3
2.1	Potential Exposure Pathways	3
3.0	CONCLUSIONS.....	5

APPENDICES

Appendix A	Exhibits
Appendix B	Table 1 – Well Inventory
Appendix C	GeoSearch Water Well Report

RECEPTOR SURVEY

**Castlebridge Properties, LLC Property
200/280 National Avenue
Spartanburg, Spartanburg County, South Carolina**

Project No. 86117104

February 5, 2015

1.0 INTRODUCTION

1.1 Site Description

The subject site is located at 200 and 280 National Avenue in Spartanburg, Spartanburg County, South Carolina, approximately one-half mile west of the intersection of New Cut Road and Interstate 26 (**Figure 1**). The site contains two semi-rectangular parcels identified by Spartanburg County map numbers 2-54-00-008.01 (8.9 acres) and 2-54-00-008.00 (12.1 acres).

The site encompasses two vacant industrial-type warehouses, asphalt parking areas, a fire-suppression water-tank, landscaped areas, security fencing and undeveloped, wooded land.

The site is located in a developed portion of Spartanburg County used for industrial-type purposes. The site is bound to the east by National Avenue, to the south by New Cut Road, to the north by Southern Railroad and to the west by developed industrial property. The site gently slopes generally to the northeast. Based on review of the 7.5-minute series topographic quadrangle (Inman, South Carolina, 1983), the elevation ranges from approximately 925 feet above mean sea level (MSL) at the intersection of New Cut Road and National Avenue to 905 feet above MSL at the northwest site boundary.

This Receptor Survey was conducted in response to a January 14, 2015 meeting between Keisha Long (SCDHEC Project Manager), Thom Morgan (Property Owner), and other interested parties. The intention of this survey is to evaluate the risk to human health and the environment as it relates to receptor impacts associated with potential off-site contaminant migration.

1.2 Previous Site Assessments

A Phase I Environmental Site Assessment (ESA) was conducted on the site in May 2005 in which a recognized environmental condition (REC) was identified with the operation of a former metal plating process by National Lock Company in the 200 National Avenue building.

In response to the environmental concerns identified during the Phase I, a Phase II ESA soil and groundwater investigation was conducted on the 200 National Avenue parcel in October 2005. Assessment findings indicated detectable concentrations of chlorinated solvents in soil and groundwater; however, the detections in soils did not exceed EPA Regional Screening Levels (RSL) for residential use.

Receptor Survey

Castlebridge Properties, LLC Property ■ Spartanburg, South Carolina
February 5, 2015 ■ Terracon Project No. 86117104



As a result of the October 2005 Phase II findings, SCDHEC requested additional assessment work and the site owner, Castlebridge Properties, LLC entered into a Voluntary Cleanup Contract (VCC) as a Responsible Party (RP). The VCC (VCC 07-5712-RP) was signed and approved with the requirement of a remedial investigation (RI) to assess the source, nature and extent of the release. A Phase I RI assessment was conducted in September 2008. Volatile organic compounds (VOC) impacts to the soil were identified; however, the reported concentrations did not exceed EPA RSLs established for residential use. Based on the distribution of the detected PCE/TCE, the source of the groundwater contamination at the site appeared to be related to the previous use of drycleaning fluids at the 200 National Avenue building and, to a lesser degree, at the 280 National Avenue building. Based on the Phase I RI screening results, seven permanent monitoring wells (MW-1D, -2D, -3, -4, -5, -6D, and -7D) were installed on the Castlebridge property in August 2009 to evaluate the on-site horizontal extent of the chlorinated hydrocarbon plume in the saprolite and shallow bedrock aquifer.

Results from the August 2009 groundwater sampling event indicated the groundwater flow direction at the site is to the north-northwest toward the assumed groundwater discharge point of the stream present on adjacent property along the site northwestern boundary. Two stream samples were collected during the RI Phase I sampling activities with no chlorinated volatile organic compounds (CVOCs) detected in the surface water or sediment samples of the stream. Groundwater analytical data from the permanent monitoring wells revealed concentrations of PCE in excess of its MCL in nearly all of the on-site wells.. Based on a review of the groundwater sampling results, DHEC requested additional assessment, including off-site properties (Cothran property), to further define the extent of CVOCs in the groundwater.

Following groundwater screening activities conducted on the adjacent Cothran property in January 2013 and April 2013, five permanent monitoring wells were installed in November 2013 on the Cothran property to monitor the off-site CVOC plume emanating from the Castlebridge property. Groundwater elevations indicate the flow direction across the area is to the north-northwest toward the assumed groundwater discharge point of the stream present along the northern and western Cothran property boundary.

Groundwater analytical data reveal concentrations of PCE and, to a lesser degree, TCE in excess of their respective MCLs (5 µg/L) in several of the on-site and off-site monitoring wells. No other VOCs were detected in the samples above applicable regulatory standards. Based on the distribution of the CVOCs, low levels of PCE/TCE impacted groundwater are present on the Castlebridge property in the vicinity of the AST area at the southwest corner of the 200 National Avenue building; in the vicinity of the storage area at the northwest corner of the 200 National Avenue building; and the eastern side of the 280 National Avenue building. Impacts to groundwater above applicable MCLs on the downgradient adjacent Cothran property are documented along the northern site boundary. The northern Cothran property boundary is bordered by a north-northwestern flowing creek and Southern Railroad line. Based on a

Receptor Survey

Castlebridge Properties, LLC Property ■ Spartanburg, South Carolina
February 5, 2015 ■ Terracon Project No. 86117104



comparison to historical data, the CVOC concentrations in the wells appeared to remain stable with slight decreases in CVOC concentrations evident in four of the wells.

A well installation and groundwater monitoring report, dated March 21, 2014, was submitted to SCDHEC. In review of the report, SCDHEC acknowledged the assessment work performed to date largely establishes the source, nature and extent of the soil and groundwater contamination. However, since VOCs have migrated off-site at concentrations above MCLs in groundwater, SCDHEC requested an evaluation of options to mitigate further off-site impacts. A Corrective Measures Study was submitted to SCDHEC on December 12, 2014. Comments regarding the Corrective Measures Study were received from Keisha Long (SCDHEC Project Manager) on January 23, 2015.

1.3 Hydrologic Setting

During previous assessment activities conducted under this VCC, water level measurements and groundwater elevations were used to approximate horizontal groundwater flow direction across the area in the water table/upper bedrock aquifer. Based on the most recent groundwater sampling event conducted on November 13, 2013, the resulting groundwater flow direction was determined to be north-northwest following the unnamed stream present along the northern and western Cothran property boundary. The groundwater elevation contours of the shallow water table and the groundwater flow direction from November 13, 2013 are shown in **Figure 2**. Additionally, a CVOC Plume Map (Figure 3) was constructed based on the analytical results of the November 12, 2013 sampling event and the projected direction of groundwater flow.

2.0 RECEPTOR EVALUATION

This receptor survey was performed to determine the location and type of receptors that could potentially be impacted by contaminant migration from the site. As part of this survey, Terracon identified surface water bodies within a one-quarter mile radius of the site as well as public; private wells used for drinking water supply within a one-half mile radius of the site; and wells used for irrigation or other non-drinking water use within a one-quarter mile radius of the site.

2.1 Potential Exposure Pathways

2.1.1 Surface Water

Terracon conducted a survey to identify all surface water bodies within one-quarter mile of the site. This survey consisted of visual observations as well as research of historical documents including aerial photographs and topographic maps from the United States Geological Survey (USGS), Natural Resources Conservation Service (NRCS) and Spartanburg County GIS; wetlands maps from the US Fish and Wildlife National Wetlands Inventory (NWI) and the FEMA

Receptor Survey

Castlebridge Properties, LLC Property ■ Spartanburg, South Carolina
February 5, 2015 ■ Terracon Project No. 86117104



Flood Insurance Rate Map (FIRM) for Spartanburg County (Number 460176, Panel 0232, Suffix D) (Appendix A). No surface water bodies were identified within a one-quarter mile radius of the property upon review of the available reference information. According to the NWI, a freshwater emergent zone is identified approximately 1,500 feet northeast and lies within a separate drainage system from the site. According to the Spartanburg County GIS, an intermittent tributary is shown approximately 400 feet northeast and forms a different drainage system from the site. According to the USGS topographic map and aerial photographs, two industrial wastewater ponds are present 0.4 miles north-northwest of the site (**Figure 1**). The location of these ponds is downgradient of the site with apparent discharge to the northeast, away from the site.

Based on visual observations, two intermittent ephemeral streams were identified approximately 250 feet northwest of the site, along the western property boundary of the Cothran property with its intersection of the Norfolk Southern rail line. The ephemeral drainage is indicated in **Figure 4**. Based on available reference information and visual observations, the ephemeral streams are not used as a drinking water supply and for recreational purposes including fishing and swimming. Surface water and sediment samples collected from the ephemeral streams in August 2009 did not reveal the presence of CVOCs. Therefore, based upon the estimated age of the release (since the 1980s), it is inferred that surface water quality is unlikely to be affected by the known groundwater impacts.

2.1.2 Groundwater

Terracon conducted a survey of available and reasonably ascertainable records for public and private wells used for drinking water supply within a one-half mile radius of the site and wells used for irrigation or other non-drinking water use within a one-quarter mile radius of the site (**Figure 5**). In addition, Terracon conducted a windshield and walking survey to identify wells in the noted radii. Based on available information supplied by the GeoSearch Water Well Report (**Appendix C**) and visual observations, 28 private and no public drinking water supply wells were identified within a one-half mile radius of the site. All private drinking water wells identified were located to the south and upgradient of the site. During the visual survey, Terracon personnel observed water meters on most of the properties with drinking water supply wells, indicating that they were also connected to the municipal water supply. Many of the municipal water connections appeared to be recently installed. Terracon personnel did not determine if, for what purpose, and/or to what extent the private drinking water wells were being utilized. It should also be noted that the GeoSearch Water Well Report indicated the presence of two observation monitoring wells (MW-1 and MW-2) located to the north of the site on the former Yellow Freight System property, outside of the 0.5 mile search radius. A listing of wells identified as part of this survey is included as **Table 1 – Well Inventory** and a map indicating search radii and well location maps are included as **Figures 5-8**.

Receptor Survey

Castlebridge Properties, LLC Property ■ Spartanburg, South Carolina
February 5, 2015 ■ Terracon Project No. 86117104



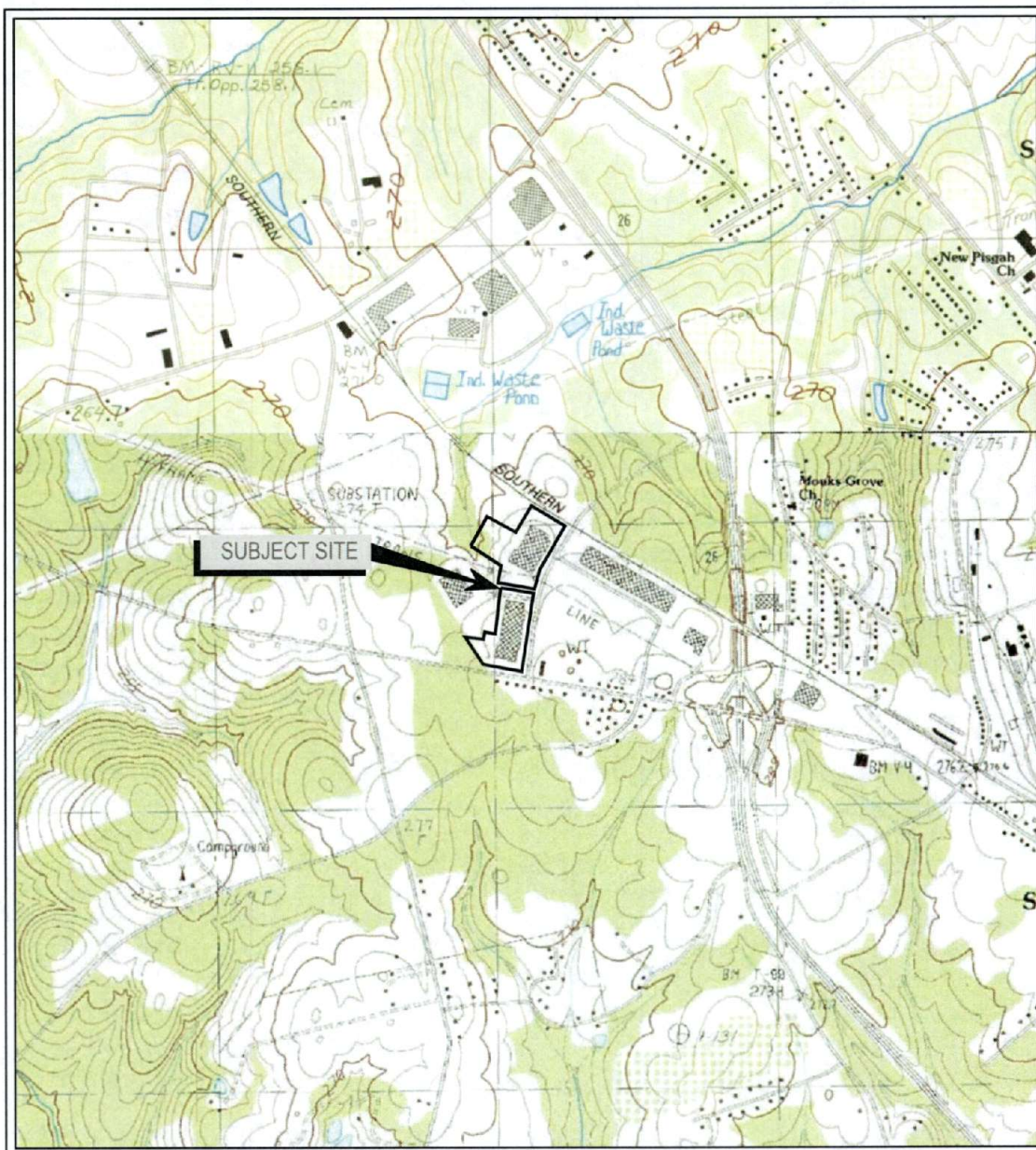
3.0 CONCLUSIONS

Based on visual observations, a review of reasonably ascertainable records, and a review of historical documents including aerial photographs and topographic maps, Terracon identified 28 private and no public drinking water supply wells within a one-half mile radius of the site. The closest potable water supply wells to the site are the Photo Marker, Inc. well (Map ID 1), located approximately 900 feet to the west of the site, and the residential wells (Map IDs 23-28), and located between approximately 520 feet and 900 feet south of the site. The current status of the private drinking water wells could not be verified; however, most of the properties with private water supply wells appeared to be supplied with municipal water. Based upon the locations of the identified private water supply wells relative to the observed topography and apparent groundwater flow direction, it is our opinion that these wells, even if in active use, are unlikely to be impacted by the CVOCs identified in on-site groundwater.

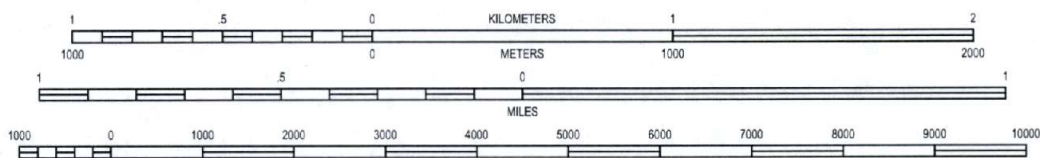
Based on visual observations, two intermittent ephemeral streams were identified approximately 250 feet northwest of the site, along the western property boundary of the Cothran property with its intersection of the Norfolk Southern rail line. Surface water and sediment samples collected from the northwest ephemeral streams in August 2009 did not reveal the presence of CVOCs; therefore, based upon the estimated age of the release (since the 1980s) and resulting plume progression, it is inferred that surface water quality is unlikely to be affected by the known groundwater impacts.

APPENDIX A

FIGURES



SCALE 1:24 000



CONTOUR INTERVAL 3 METERS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

INMAN, SOUTH CAROLINA
WELLFORD, SOUTH CAROLINA
1983
7.5 MINUTE SERIES (TOPOGRAPHIC)

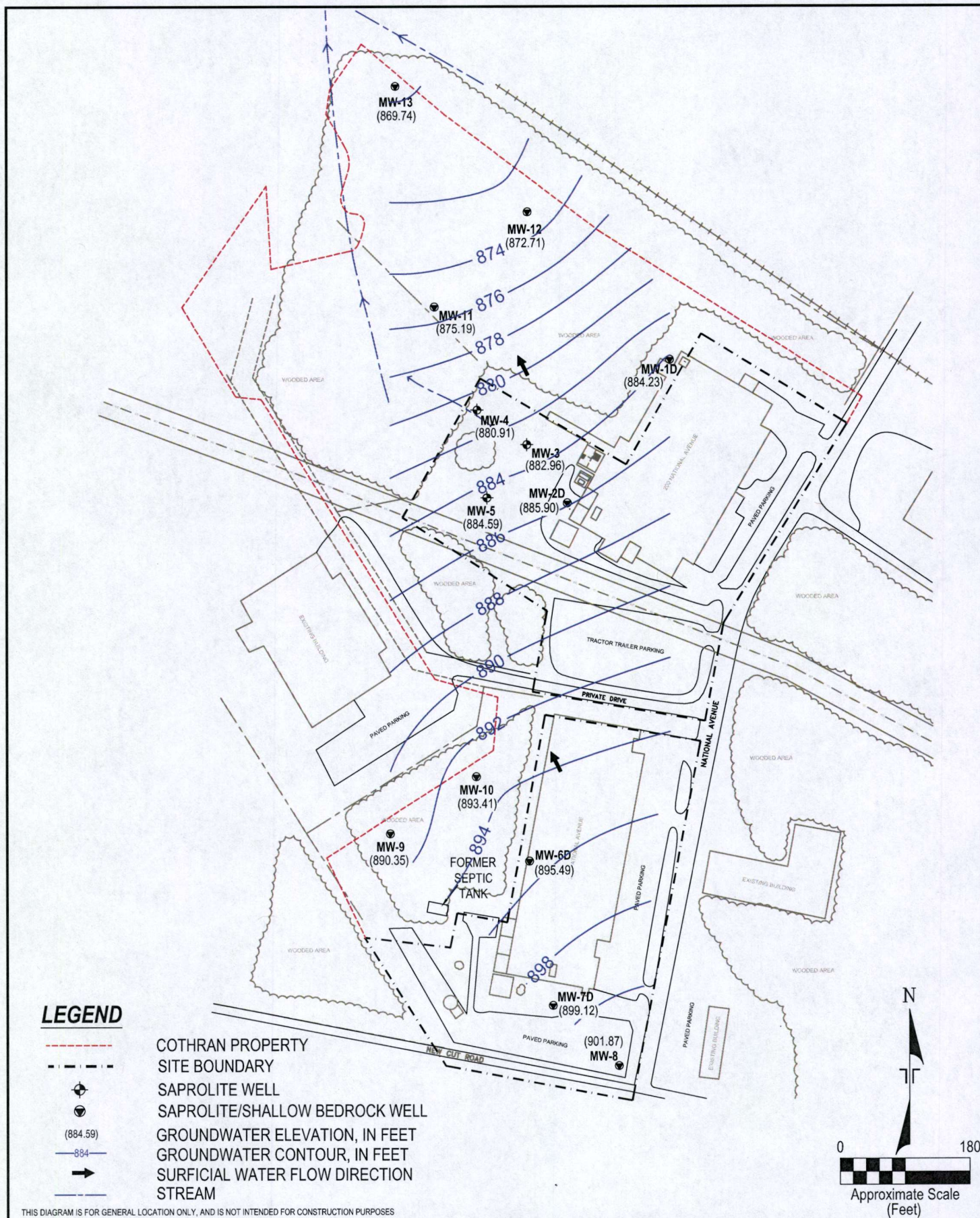
Project Mng:	CDE	Project No.	86117104
Drawn By:	CTW	Scale:	AS SHOWN
Checked By:	CDE	File No.	
Approved By:	CDE	Date:	January 2015

Terracon
Consulting Engineers and Scientists

3534 Rutherford Road Taylors, SC 29687
(864) 292-2901 (864) 292-6361

SITE LOCATION MAP
RECEPTOR SURVEY CASTLEBRIDGE PROPERTIES, LLC PROPERTY 200 AND 280 NATIONAL AVENUE SPARTANBURG, SPARTANBURG COUNTY, SC

FIG. No.
1



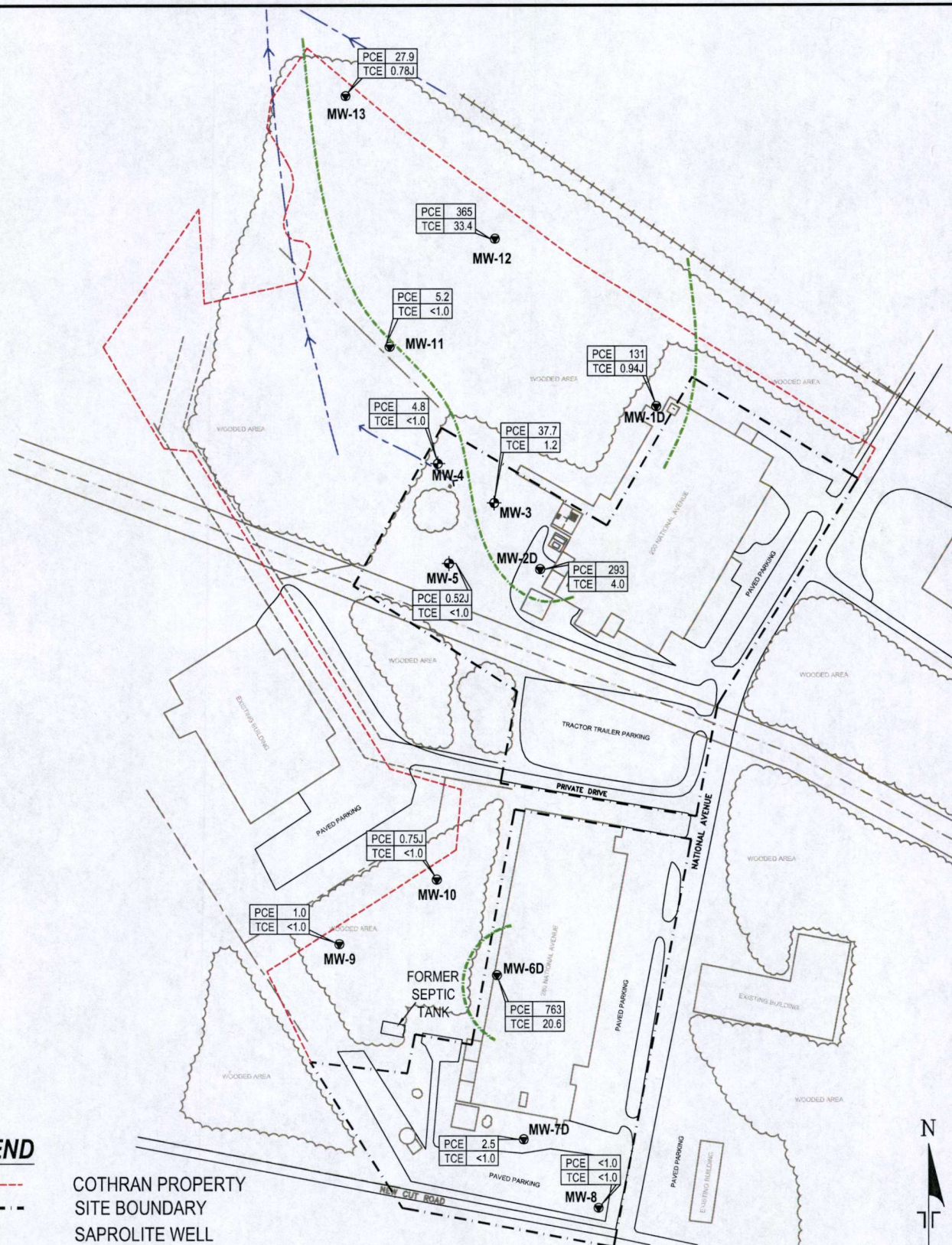
Project Mng:	CDE
Drawn By:	DWD
Checked By:	CDE/MRF
Approved By:	CDE

Project No.	86117104
Scale:	AS SHOWN
File No.	RI86117104-3
Date:	January 2015

Terracon Consulting Engineers and Scientists	
3534 Rutherford Road (864) 292-2901	Taylors, SC 29687 (864) 292-6361

POTENTIOMETRIC MAP
RECEPTOR SURVEY
CASTLEBRIDGE PROPERTIES, LLC PROPERTY
200 AND 280 NATIONAL AVENUE
SPARTANBURG, SPARTANBURG COUNTY, SC

FIG. No.
2



THIS DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Mng:	CDE	Project No.	86117104
Drawn By:	DWD	Scale:	AS SHOWN
Checked By:	CDE/MRF	File No.	TMR86117104-4
Approved By:	CDE	Date:	JANUARY 2014

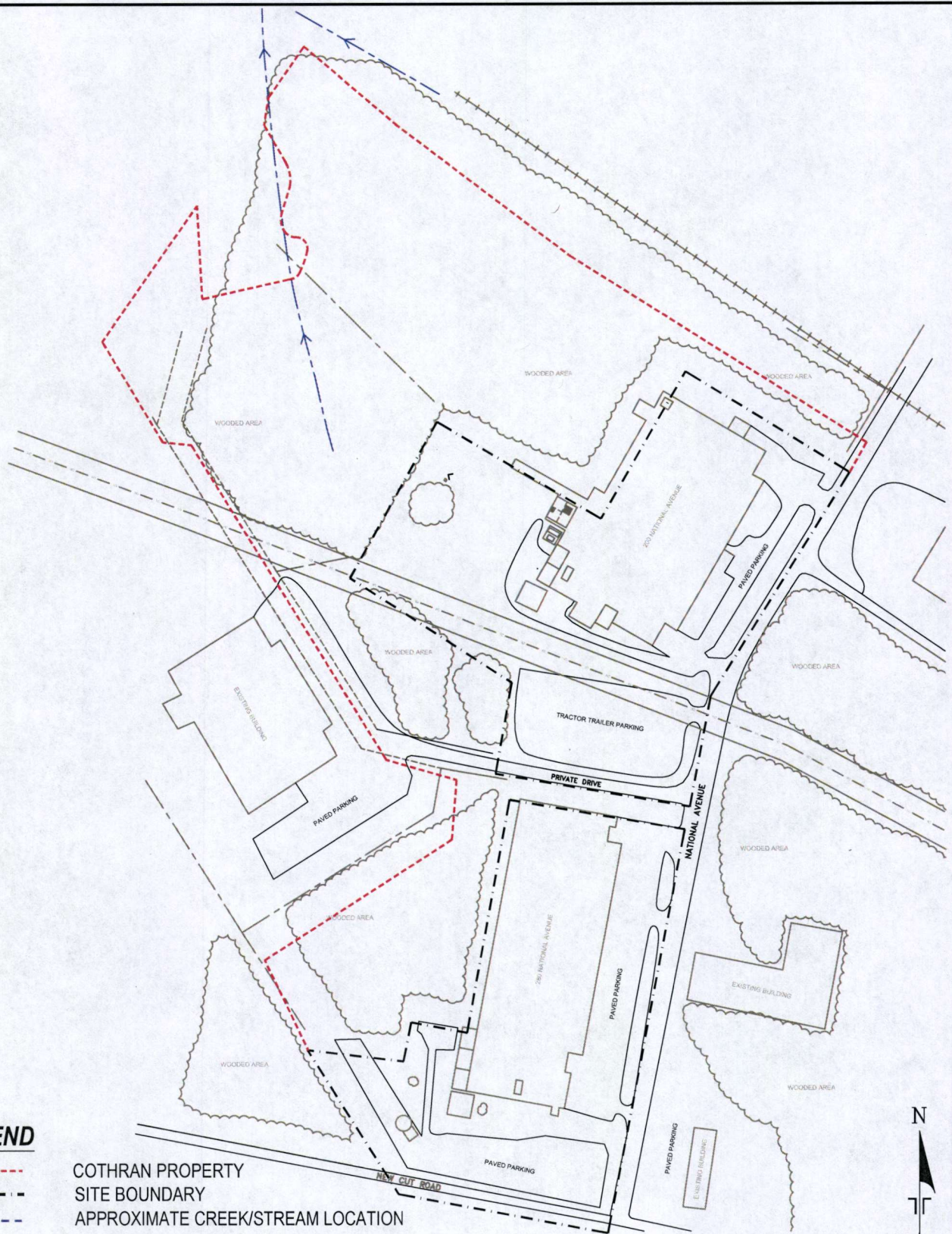
Terracon
Consulting Engineers and Scientists

3534 Rutherford Road
(864) 292-2901

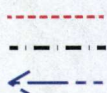
Taylors, SC 29687
(864) 292-6361

CVOC PLUME MAP
RECEPTOR SURVEY
CASTLEBRIDGE PROPERTIES, LLC PROPERTY
200 AND 280 NATIONAL AVENUE
SPARTANBURG, SPARTANBURG COUNTY, SC

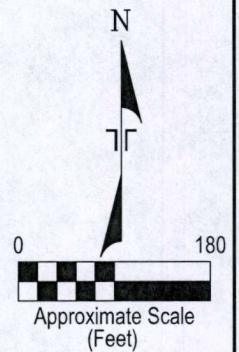
FIG. No.
3



LEGEND



COTHRAN PROPERTY
SITE BOUNDARY
APPROXIMATE CREEK/STREAM LOCATION



THIS DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

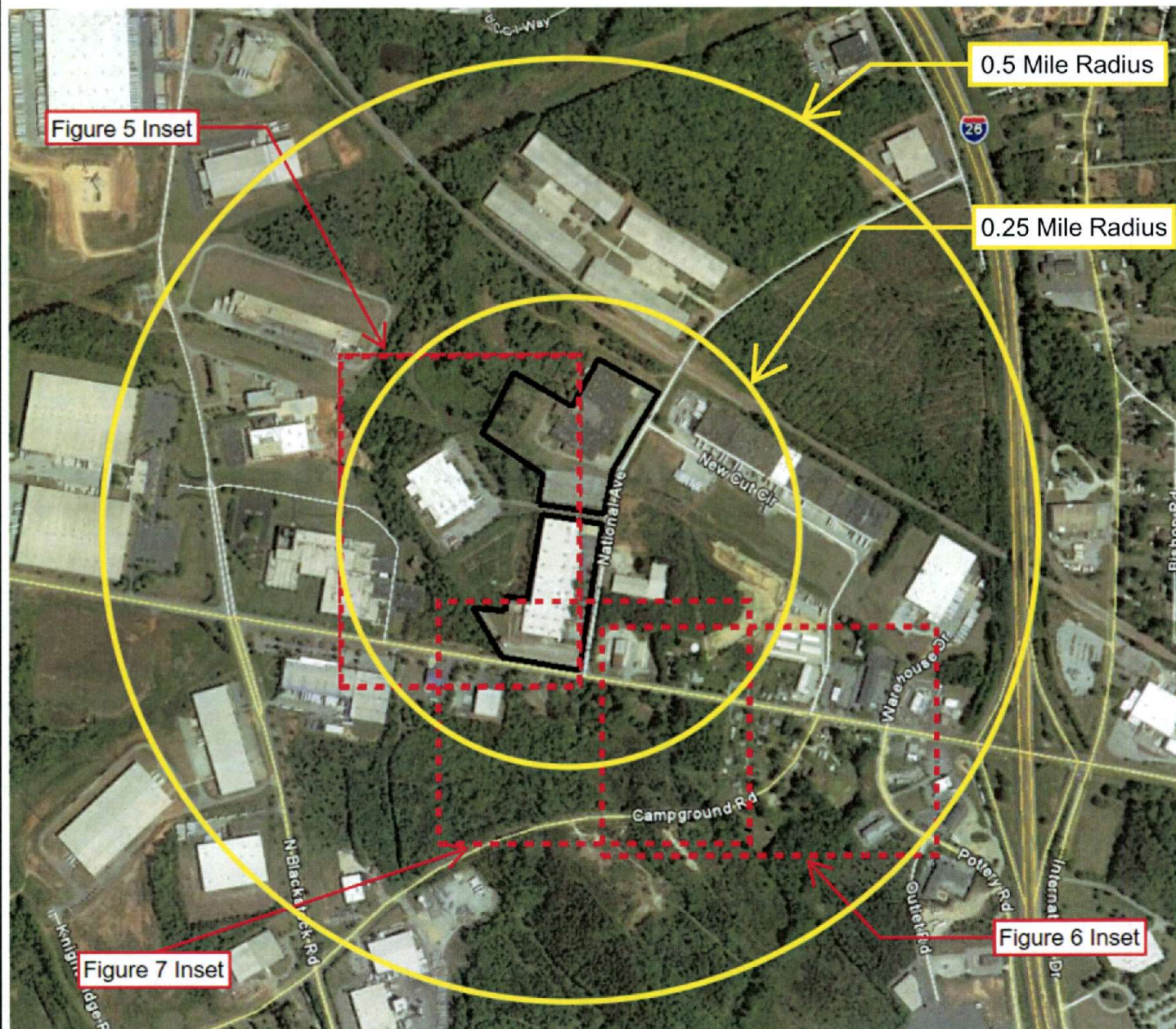
Project Mngr:	CDE	Project No.	86117104
Drawn By:	CTW	Scale:	AS SHOWN
Checked By:	CDE	File No.	
Approved By:	CDE	Date:	January 2015

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SURFACE WATER BODIES
RECEPTOR SURVEY CASTLEBRIDGE PROPERTIES, LLC PROPERTY 200 AND 280 NATIONAL AVENUE SPARTANBURG, SPARTANBURG COUNTY, SC

FIG. No.
4



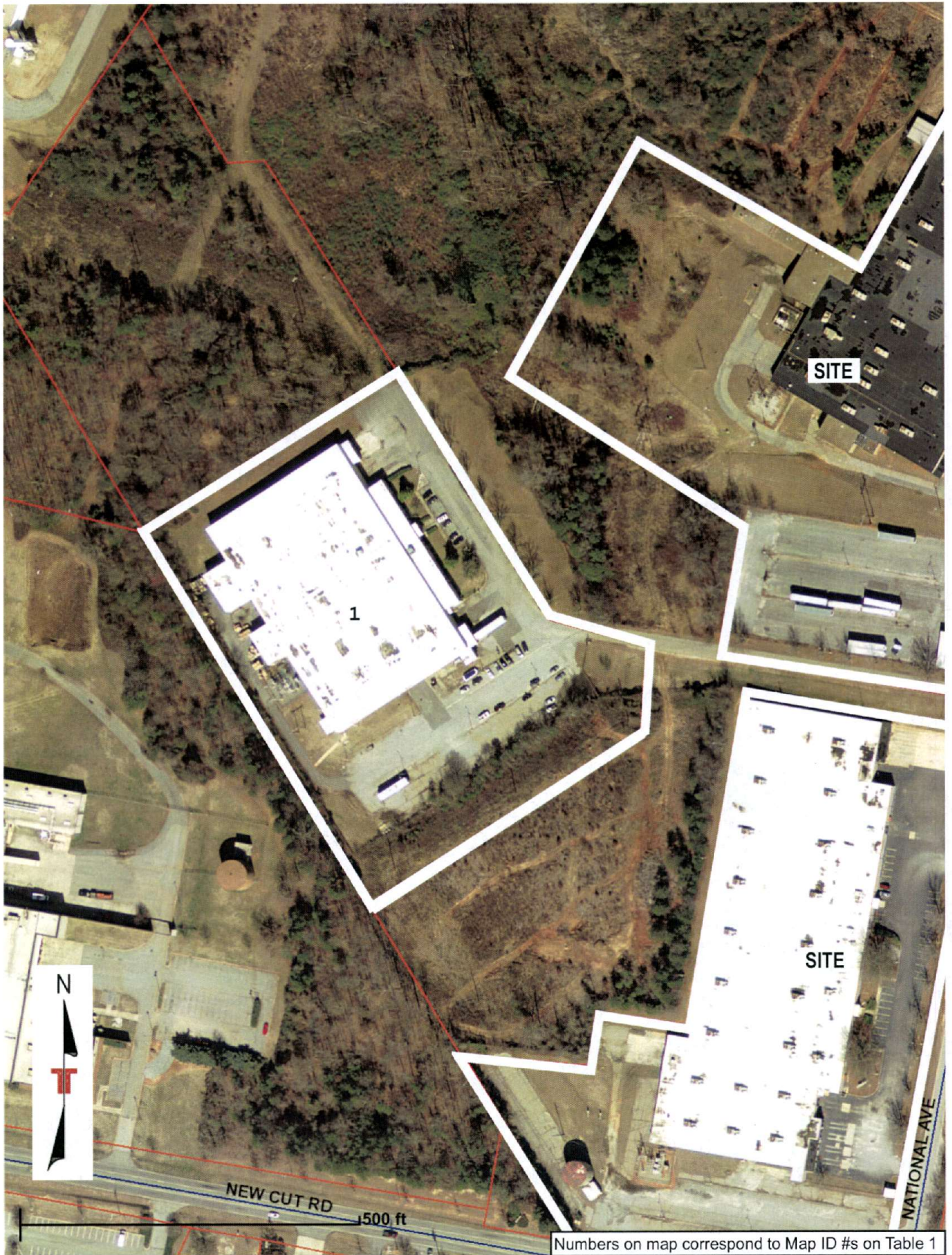
— APPROXIMATE SITE BOUNDARY

Project Mng:	CDE	Project No.	86117104
Drawn By:	CTW	Scale:	AS SHOWN
Checked By:	CDE	File No.	
Approved By:	CDE	Date:	January 2015

3534 Rutherford Road	Taylors, SC 29687
(864) 292-2901	(864) 292-6361

WATER WELL RADIUS MAP
RECEPTOR SURVEY
CASTLEBRIDGE PROPERTIES, LLC PROPERTY
200 AND 280 NATIONAL AVENUE
SPARTANBURG, SPARTANBURG COUNTY, SC

FIG. No.
5



Project Mng'r:	CDE	Project No.	86117104
Drawn By:	CTW	Scale:	AS SHOWN
Checked By:	CDE	File No.	
Approved By:	CDE	Date:	January 2015

Terracon
Consulting Engineers and Scientists

3534 Rutherford Road Taylors, SC 29687
(864) 292-2901 (864) 292-6361

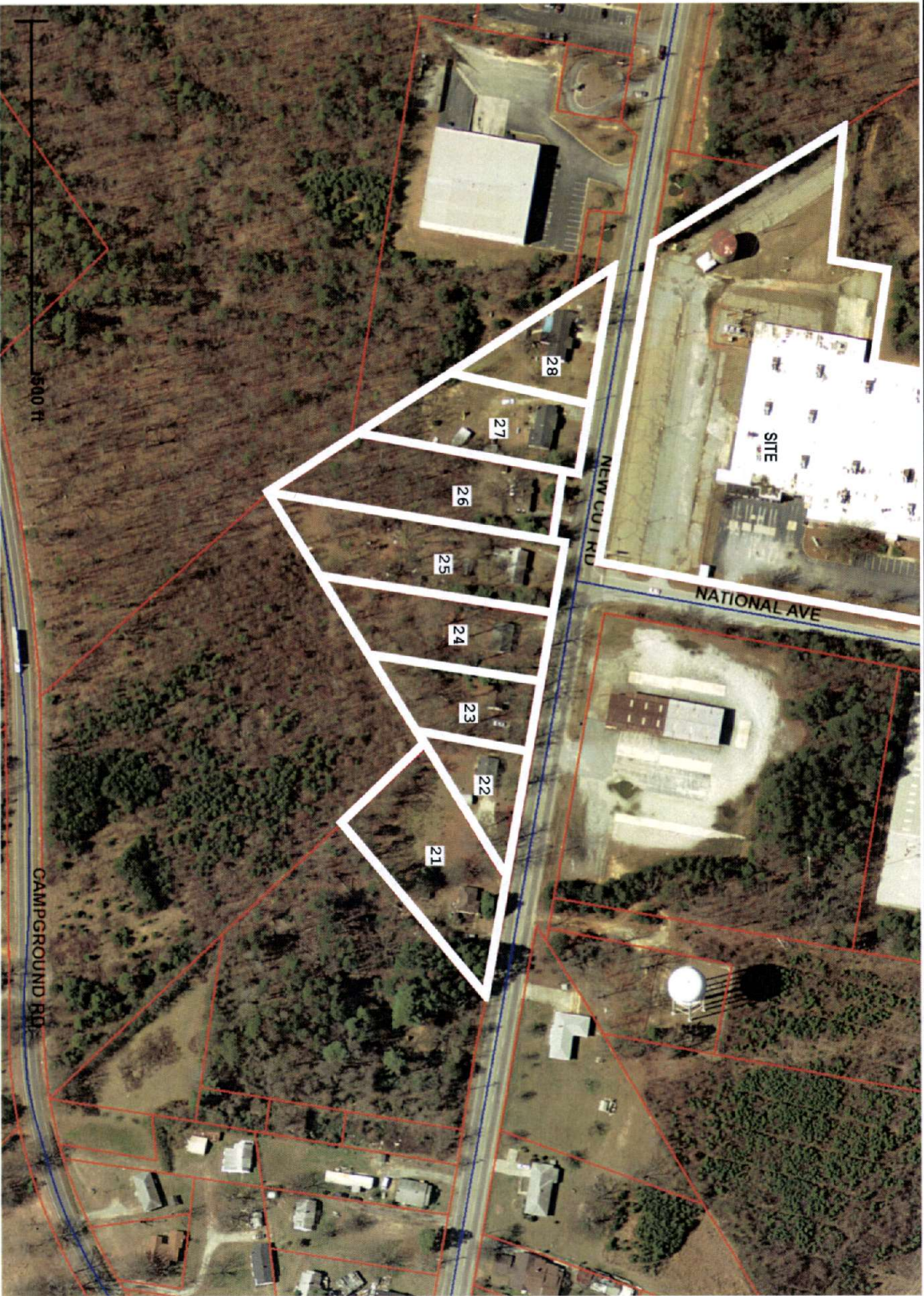
WELL LOCATION MAP - WEST
RECEPTOR SURVEY CASTLEBRIDGE PROPERTIES, LLC PROPERTY 200 AND 280 NATIONAL AVENUE SPARTANBURG, SPARTANBURG COUNTY, SC

FIG. No.
6



Numbers on map correspond to Map ID #s on Table 1

Project Map	CDE	Project No.	86117104	Terracon Consulting Engineers and Architects 5505 S. HUNTERTON ROAD TALLahas, OK 73309 781.292.2001 FAX 781.292.2881		WELL LOCATION MAP - SOUTHEAST RECEPTOR SURVEY CASTLEBRIDGE PROPERTIES, LLC PROPERTY 201 AND 250 NATIONAL AVENUE SPARTANBURG, SPARTANBURG COUNTY, SC	FIGURE
Drawn By	CTW	Scale	AS SHOWN				
Checked By	CDE	File No.					
Approved By	CDE	Date	JANUARY 2015				



Numbers on map correspond to Map ID #s on Table 1

Project Name	CDE	Project No.	86117104	WELL LOCATION MAP - SOUTH	FIGURE
Drawn By	CTW	Title	AS SHOWN	RECEPTOR SURVEY	
Checked By	CDE	For No.		CASTLEBRIDGE PROPERTIES, LLC PROPERTY	
Approved By	CDE	Date	JANUARY 2015	200 AND 280 NATIONAL AVENUE	
				SPARTANBURG, SPARTANBURG COUNTY, SC	8

Terracon
Consulting Engineers and Scientists
3501 S. BATES RD. JAN 05, 10:29 AM
187.726281



U.S. Fish and Wildlife Service

National Wetlands Inventory

National Wetlands Inventory

Feb 4, 2015



This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:

Wetlands

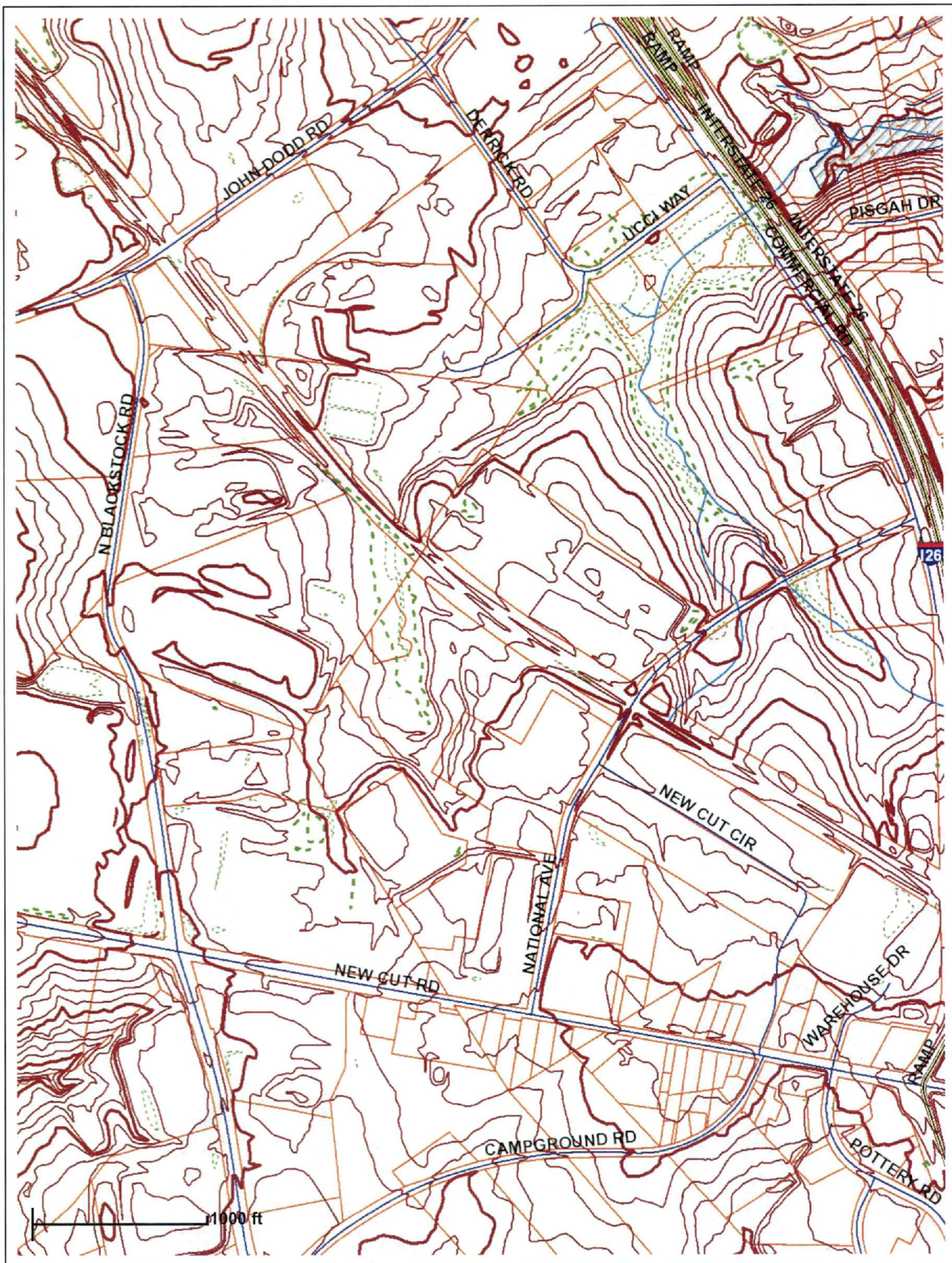
- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

Riparian

- Herbaceous
- Forested/Shrub

Riparian Status

- Digital Data



flood insurance is available in this community, contact
National Flood Insurance Program at 1-800-638-6620.



MAP SCALE 1" = 500'

250 0 500 1000

NFIP

PANEL 0232D

FIRM
FLOOD INSURANCE RATE MAP
SPARTANBURG COUNTY,
SOUTH CAROLINA
AND INCORPORATED AREAS

PANEL 232 OF 555

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS

COMMUNITY SPARTANBURG COUNTY
NUMBER 46076
PANEL 0232
SUFFIX D

NATIONAL FLOOD INSURANCE PROGRAM

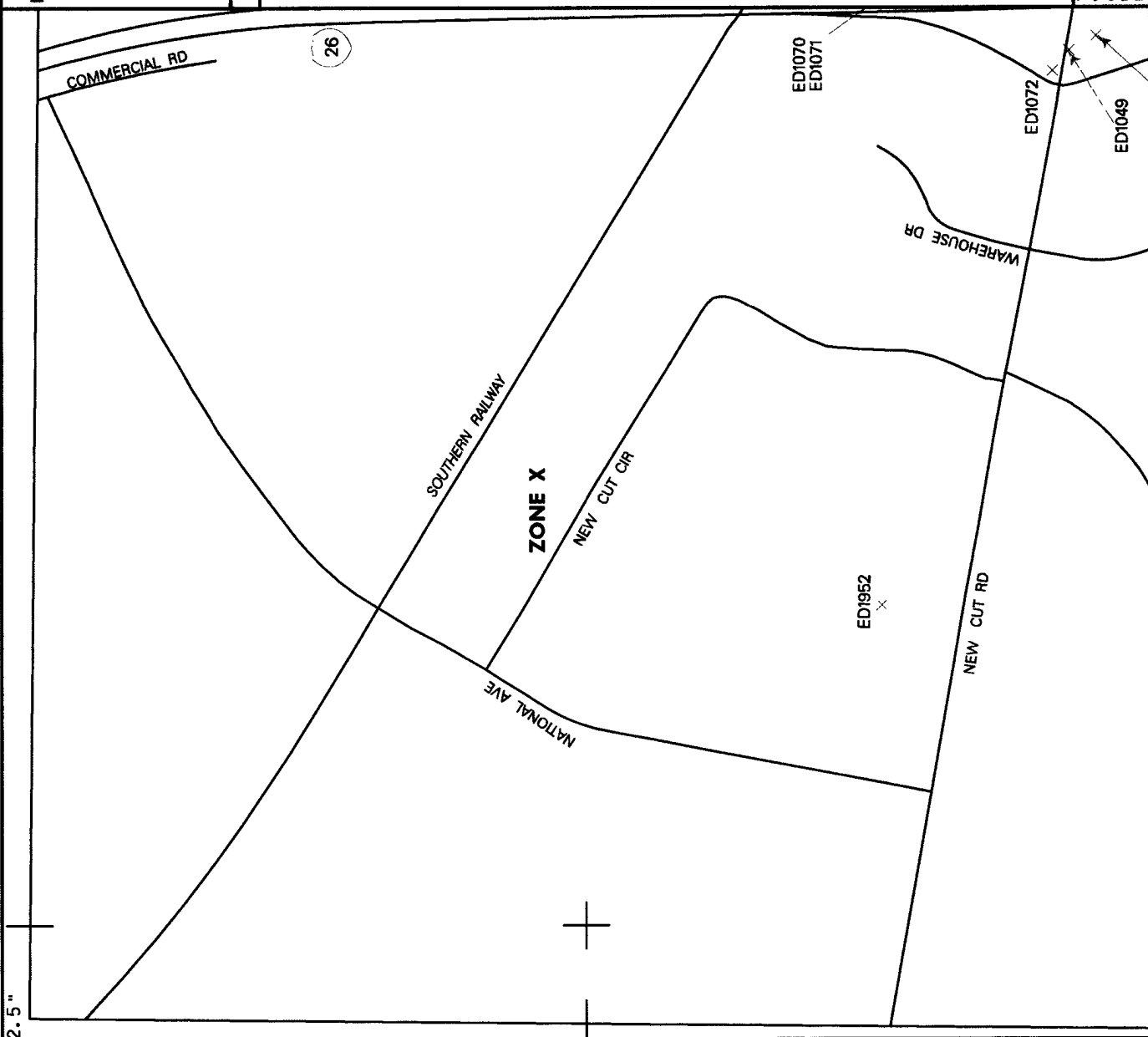
Notes to User: The Map Number shown below should be used
when placing map orders. The Community Number shown
above should be used on insurance applications for the subject
community.

MAP NUMBER
450830232D
EFFECTIVE DATE
JANUARY 6, 2011



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It
was extracted using F-MIT On-Line. This map does not reflect changes
or amendments which may have been made subsequent to the date on the
title block. For the latest product information about National Flood Insurance
Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



APPENDIX B

TABLES

Table 1 - Well Inventory
Receptor Survey
Castlebridge Properties, LLC Property
200 and 280 National Avenue
Spartanburg, Spartanburg County, SC

Map ID	Address	Parcel Number	Owner Name	Owner Telephone Number	Well Type	Distance / Direction
1	212 National Ave	2-54-00-008.03	Photo Marker, Inc	864.242.8400	Private Water Supply Well	900' / W
2	109 Campground Rd	6-07-00-016.04	Randall & Karan Landrum	864.587.0322	Private Water Supply Well	1900' / SE
3	2205 New Cut Rd	6-07-00-008.01	Thelma Crawford	NA	Private Water Supply Well	1800' / SE
4	106 Campground Rd	6-07-00-008.04	Frances Jones	864.576.0739	Private Water Supply Well	1800' / SE
5	2241 New Cut Rd	6-07-00-008.03	Frances Meadows	NA	Private Water Supply Well	1600' / SE
6	2243 New Cut Rd	6-07-00-008.00	Kappa, LLC	NA	Private Water Supply Well	1550' / SE
7	2251 New Cut Rd	6-07-00-007.01	Betty J Rookard	NA	Private Water Supply Well	1524' / SE
8	2445 New Cut Rd	6-07-00-007.00	Frances Johnson / Mae Jones	864.576.0739	Private Water Supply Well	1400' / SE
9	132 Campground Rd	6-07-00-013.00	Simpson Jones, Jr.	NA	Private Water Supply Well	1520' / SE
10	122 Campground Rd	6-07-00-009.00	David Johnson	864.595.8281	Private Water Supply Well	1620' / SE
11	128 Campground Rd	6-07-00-012.00	Twanda Johnson	864.576.0452	Private Water Supply Well	1650' / SE
12	126 Campground Rd	6-07-00-011.00	Woodrow Hudson	571.542.3899	Private Water Supply Well	1700' / SE
13	105 Campground Rd	6-07-00-016.02	Mary & Charlie Rogers	864.587.3977	Private Water Supply Well	1950' / SE
14	2141 New Cut Rd	6-07-00-016.01	Elene Rogers	864.576.0724	Private Water Supply Well	1890' / SE
15	2133 New Cut Rd	6-07-00-016.03	Annie Jones (Trustee)	NA	Private Water Supply Well	2030' / SE
16	2414 New Cut Rd	2-55-00-009.05	Martha Williams	864.576.3151	Private Water Supply Well	1590' / SE
17	2428 New Cut Rd	2-55-00-009.04	Archie & Mary Means	864.587.2283	Private Water Supply Well	1500' / SE
18	2432 New Cut Rd	2-55-00-009.03	Mildred Hogue	NA	Private Water Supply Well	1420' / SE
19	2434 New Cut Rd	2-55-00-009.02	Wilma Atchison	NA	Private Water Supply Well	1310' / SE
20	2456 New Cut Rd	2-55-00-009.01	Bonar Thurmon	864.576.2366	Private Water Supply Well	1100' / SE
21	2409 New Cut Rd	6-07-00-002.00	Deborah Brewton	NA	Private Water Supply Well	1100' / SE
22	2481 New Cut Rd	6-07-00-015.01	Mamie Wilkins	864.576.3817	Private Water Supply Well	900' / SSE
23	2487 New Cut Rd	6-07-00-015.04	Drucilla Ann Jasper	864.587.6950	Private Water Supply Well	780' / S
24	2493 New Cut Rd	6-06-00-051.00	Celeste Petty	864.576.3174	Private Water Supply Well	720' / S
25	2501 New Cut Rd	6-06-00-050.00	Josephine Means	864.576.0474	Private Water Supply Well	650' / S
26	2513 New Cut Rd	6-06-00-045.01	Darryl McKenzie	NA	Private Water Supply Well	600' / S
27	2517 New Cut Rd	6-06-00-049.01	Hollis & Mary Holcombe	864.574.6577	Private Water Supply Well	540' / S
28	2521 New Cut Rd	6-06-00-049.00	Real Estate Investors, LLC	864.587.9418	Private Water Supply Well	520' / S

APPENDIX C

GEOSEARCH WATER WELL REPORT



On time. On target. In touch.™

Water Well Report

<http://www.geo-search.net/QuickMap/index.htm?DataID=Standard0000099553>

Click on link above to access the map and satellite view of current property

Target Property:

Castlebridge

280 NATIONAL AVE

**SPARTANBURG, Spartanburg County, South
Carolina 29303**

Prepared For:

Terracon- Taylors

Order #: 45545

Job #: 99553

Date: 01/15/2015

TARGET PROPERTY SUMMARY

Castlebridge

280 NATIONAL AVE

SPARTANBURG, Spartanburg County, South Carolina 29303

USGS Quadrangle: Wellford, SC

Target Property Geometry: Area

Target Property Longitude(s)/Latitude(s):

**(-82.031178, 34.993846), (-82.030149, 34.992457), (-82.028625, 34.992299), (-82.028024, 34.995375),
(-82.026951, 34.996887), (-82.030942, 34.999136), (-82.031307, 34.998767), (-82.031071, 34.998381),
(-82.031136, 34.998099), (-82.030921, 34.997959), (-82.030985, 34.997801), (-82.031693, 34.997678),
(-82.031736, 34.998258), (-82.032380, 34.997379), (-82.031908, 34.996799), (-82.031715, 34.996799),
(-82.030342, 34.995006), (-82.029827, 34.994935), (-82.029870, 34.994549), (-82.031178, 34.993846)**

County/Parish Covered:

Spartanburg (SC)

Zipcode(s) Covered:

Spartanburg SC: 29303

State(s) Covered:

SC

***Target property is located in Radon Zone 2.**

**Zone 2 areas have a predicted average indoor radon screening level between 2 and 4 pCi/L
(picocuries per liter).**

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DATABASE FINDINGS SUMMARY

DATABASE	ACRONYM	LOCA- TABLE	UNLOCA- TABLE	SEARCH RADIUS (miles)
<u>FEDERAL</u>				
UNITED STATES GEOLOGICAL SURVEY NATIONAL WATER INFORMATION SYSTEM	NWIS	0	0	0.5000
SUB-TOTAL		0	0	
<u>LOCAL</u>				
PIEDMONT WATER WELLS	PIEDMONTWW	2	0	0.5000
SUB-TOTAL		2	0	

TOTAL	2	0
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LOCATABLE DATABASE FINDINGS

ACRONYM	SEARCH RADIUS (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
<u>FEDERAL</u>								
NWIS	.5000	0	0	0	0	NS	NS	0
SUB-TOTAL		0	0	0	0	0	0	0
<u>LOCAL</u>								
PIEDMONTWW	.5000	0	0	0	2	NS	NS	2
SUB-TOTAL		0	0	0	2	0	0	2

TOTAL	0	0	0	2	0	0	2
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NOTES:

NS = NOT SEARCHED

TP/AP = TARGET PROPERTY/ADJACENT PROPERTY



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REPORT SUMMARY OF LOCATABLE SITES

MAP ID#	DATABASE NAME	SITE ID#	DISTANCE FROM SITE	SITE NAME	ADDRESS	CITY, ZIP CODE	PAGE #
1	PIEDMONTWW	43C--v001	0 400 N		SE OF INMAN		1
2	PIEDMONTWW	43C--v003	0.460 N		SE OF INMAN		2



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PIEDMONT WATER WELLS (PIEDMONTWW)

MAP ID# 1

Distance from Property: 0.40 mi. N

SITE INFORMATION

SCWRC ID: 43C--v001

OWNER NAME: YELLOW FREIGHT SYSTEM

OWNER WELL ID: MW-1

LOCATION: SE OF INMAN

ELEVATION: 863

WATER USAGE: OBSERVATION (NON-AUTOMATED)

DEPTH DRILLED: 27

YIELD (GALLONS PER MINUTE): 0

DRILL YEAR COMPLETED: 10/19/88

STATIC WATER LEVEL YEAR: -14

DRILLER NAME: ENVIRONMENTAL EXP.

REMARKS: TOTAL DEPT OF WELL 22', MICACEOUS SILT (MH); LOCATED ON DOQQ USING SCALED SITE DIAGRAM;

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PIEDMONT WATER WELLS (PIEDMONTWW)

MAP ID# 2 Distance from Property: 0.46 mi. N

SITE INFORMATION

SCWRC ID: 43C--v003

OWNER NAME: YELLOW FREIGHT SYSTEM

OWNER WELL ID: NOT REPORTED

LOCATION: SE OF INMAN

ELEVATION: 852

WATER USAGE: OBSERVATION (NON-AUTOMATED)

DEPTH DRILLED: 22

YIELD (GALLONS PER MINUTE): 0

DRILL YEAR COMPLETED: 10/20/88

STATIC WATER LEVEL YEAR: -11

DRILLER NAME: ENVIRONMENTAL EXP.

REMARKS: TOTAL WELL DEPT 21.5' MICACEOUS SILT (MH); LOCATED ON DOQQ USING SCALED SITE DIAGRAM WITH

ENVIRONMENTAL RECORDS DEFINITIONS - FEDERAL

NWIS

United States Geological Survey National Water Information System

VERSION DATE: 7/2014

This USGS National Water Information System database only includes groundwater wells. The USGS defines this well type as: A hole or shaft constructed in the earth intended to be used to locate, sample, or develop groundwater, oil, gas, or some other subsurface material. The diameter of a well is typically much smaller than the depth. Wells are also used to artificially recharge groundwater or to pressurize oil and gas production zones. Additional information about specific kinds of wells should be recorded under the secondary site types or the Use of Site field. Underground waste-disposal wells should be classified as waste-injection wells.

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ENVIRONMENTAL RECORDS DEFINITIONS - LOCAL

PIEDMONTWW Piedmont Water Wells

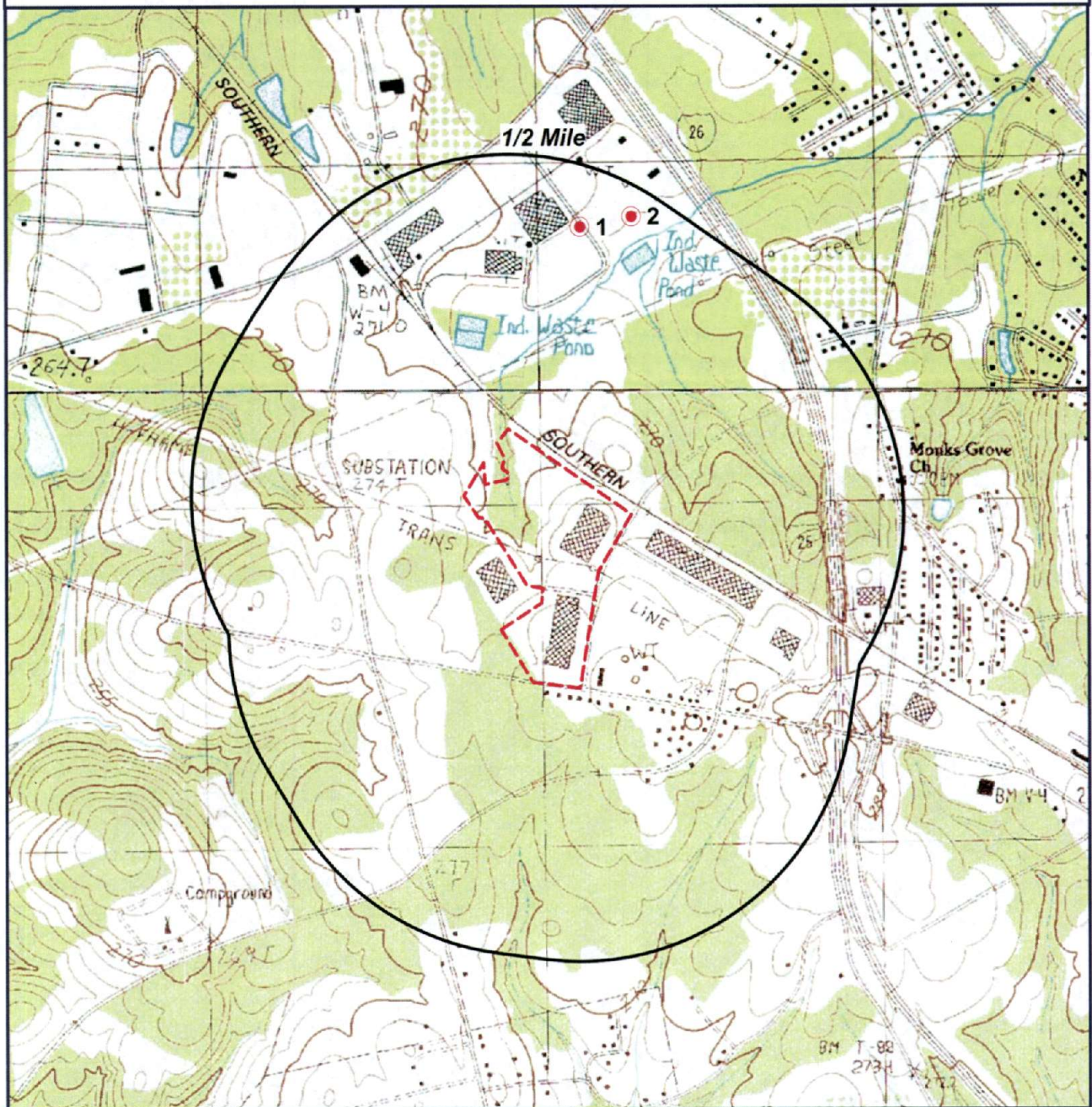
VERSION DATE: 2/2013

The Piedmont region water well database is provided by the South Carolina Department of Natural Resources (SCDNR). Due to SCDNR budget constraints and staff changes, there is limited access to Piedmont well records and this data has not been updated in several years. The Piedmont database contains many wells whose locations were not precisely determined; these wells were located only to within a minute of latitude and longitude. The Piedmont region includes well data for the following 18 counties: Abbeville, Anderson, Cherokee, Chester, Edgefield, Fairfield, Greenville, Greenwood, Lancaster, Laurens, McCormick, Newberry, Oconee, Pickens, Saluda, Spartanburg, Union and York.



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WATER WELL MAP



- ▭ Target Property (TP)
- PIEDMONTWW

Castlebridge
280 NATIONAL AVE
SPARTANBURG, South Carolina
29303

CONTOUR LINES REPRESENTED IN FEET



0' 750' 1500' 2250'
 SCALE: 1" = 1500'

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